

REMARKS/ARGUMENTS

Claims 1, 3-11 and 13-14 are active.

Claims 1 and 13 are amended to define the relative concentrations of a, b and c as described in the specification at page 20, lines 9-11.

Claim 14 is supported by the disclosure at page 25, line 23

No new matter is added.

Applicants thank the Examiner for discussing this case with their undersigned representative on February 16, 2010. During this discussion, the rejection of Claims 1-3 and 5-13 under 35 USC 103(a) in view of the combination of Pauls (US 6,274,381) and Oppenlander (US 6,533,830) was addressed. The substance of this discussion is contained with the expanded remarks below as it pertains to the rejection.

The Examiner again cites Pauls for teaching dyes useful for tagging petroleum products. The Examiner cites Oppenlander for disclosure relevant to carrier oils, particularly polyalkene alcohol polyalkoxylates, useful for fuel in lubricant compositions. Further, the Examiner cites to Oppenlander with disclosure relevant for the concentration of additives in the claims (25 to 90%), see page 4, lines 1-3 of the Official Action.

The Examiner finds that as Pauls suggests that the dye should be stable in the presence of additives and as Oppenlander (without such dyes) teaches concentrates "it would have been obvious . . . to have used the carrier oil of Oppenlander for preparing additive concentrates according to the invention of Pauls, as Oppenlander teaches the carrier oils are suitable for use in fuel and lubricant compositions." See page 4, 2nd paragraph of the Official Action).

These arguments, however, are erroneous and not based on the objective evidence in the references. Rather they are misinterpretations of the citations that are misapplied to

reconstruct the claimed invention in hindsight. Conclusions of obviousness based on clearly erroneous findings, as is here the case, cannot stand. *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289 (Fed. Cir. 2006).

The Examiner alleges that “Pauls teaches the dyes are stable when combined with additives such as deposit control agents (dispersants) and detergents according to the claimed limitations (column 4, lines 52-54). This conclusion, however, ignores the fact that Pauls discussion noted in the rejection is nothing more than speculation and prophetic, not backed by any evidence that this is, in fact, true. Furthermore, the additive concentrates described in Pauls are in relation to the dyes but as Applicants have already explained, Pauls relates to diluted forms and the stability of the dyes in those diluted compositions. Oppenlander is silent with respect to the dyes in the claims nor does Oppenlander provide any reasonable expectation that the dyes, taught in Pauls, would be stable in more concentrated form, as in Oppenlander.

In more detail, Pauls et al. describe a method for invisibly tagging liquid petroleum products such as fuels, heating oils, lubricating oils etc. with dyes. The dyes are used at very low concentrations to prevent visual recognition of the marking. Concentrated solutions of the markers in solvents are mentioned in Pauls et al. (col. 7, lines 18-30), however, these solutions do not contain further additives and no addition of further additives is suggested. Pauls et al. only describe adding a concentrated solution of the marker to the petroleum product which contains additives in a diluted regime, thereby also diluting the dye to the desired concentration. Therefore, it is not possible that the stability problems, which are solved by the present invention, relating to concentrates comprising markers and additives will arise in the context of Pauls et al. Markers and additives simply do not interact in a concentrated solution in Pauls et al.

Stability of the markers against additives, such as deposit control agents, antioxidants, or detergents, present in the tagged petroleum products is discussed in Pauls et al. (c.f. “wish-list”, col. 4, lines 52-56). However, the stability issues mentioned in Pauls et al. are with respect to the marked product, which corresponds to the diluted state of the marker at very low concentration. The question of stability of the marker at high concentrations in the package is, as already mentioned above, not addressed in Pauls et al. Therefore, the stability of anthraquinone markers in concentrated solutions is surprising to a person skilled in the art (see, the experiments on storage stability in the application starting at page 26).

Oppenländer et al. merely describe the composition of concentrated additive packages for fuel and lubricants. Markers are not mentioned by Oppenländer et al. and there is no information to be found to add markers to the concentrate.

That the cited references teaches very different compositions, with only general disclosure as to what could be included in such very different compositions, there is simply nothing in the art that suggests to the problem underlying the present invention, stabilization of anthraquinone markers in concentrated solutions (see amended claim 1 and the defined concentrations provided therein). The disclosures that are relied upon in the rejection are only “general guidance” (Bayer Schering Pharma AG v. Barr Laboratories, Inc. 2009 U.S. App. LEXIS 17372, 91 U.S.P.Q.2D (BNA) 1569 (Fed. Cir. 2009)) and simply is not the “finite disclosure” and guidance to “a particular solution” that the law requires. (*Id.*)

Even if a person skilled in the art, using Pauls et al. in view of Oppenländer et al., would have considered to add markers directly to the concentrated package the subject matter of Claim 1, the unexpected effects shown by the examples of the present application rebut any contention of *prima facie* obviousness.

Table 1 of the present application presents a typical composition of a fuel and lubricant additive concentrate. The two main representative components of such a concentrate are detergent (Polyisobutenamine (PIBA)) and carrier oil (Fatty alcohol propoxylate).

The stability of several anthraquinone markers is tested against the two major components of the concentrate and compared to the stability of a non-anthraquinone marker (phthalocyanine based).

It is clear from the results of Table 2 that the markers of the invention are stable against the detergent, while the comparative marker is not. The same holds true for stability with respect to the carrier oil shown in Table 3. The relative concentration of detergents and carrier oils with respect to the markers correspond to typical concentration conditions in the packages or contain even an increased amount of the detergent or carrier oil, which means that the markers have an additional stability safety margin as shown under these harsh conditions.

The storage stability of compounds 10 to 12 compared to detergent and the fuel and lubricant additive concentrate of Table 1 is then further described in detail. This data shows that the anthraquinone markers are stable against the detergent (also at higher temperatures) which was to be expected from the results of Table 2, but furthermore these results exemplify, that using the concentrate mixture itself (with a combination of detergent and carrier oil) does not lead to additional unexpected effects for the stability (even at higher temperatures). The anthraquinone markers remain stable.

Based on the examples it is therefore clear for a person skilled in the art that anthraquinone markers are unexpectedly more stable against components of the concentrates (detergents, carrier oil) as well as against the concentrate itself than other markers.

During the above-noted discussion held on February 16, 2010, these data were discussed in detail, its relevance to the claims, and the position that these data are not "commensurate in scope" with the scope of the claims. While certain specific concentrations are used in the Examples, it is not necessary to limit the claims to precisely what is shown in the data. That is, the amount of anthraquinone marker is implicitly known to a skilled person as its presence in the concentrate is as a marker. Furthermore, the evidence that has been provided in the specification demonstrates a trend from which one of ordinary skill in the art could conclude that the evidence is commensurate in scope with claimed subject matter that is alleged to be *prima facie* obvious. See *In re Kollman*,¹

We feel that the unobviousness of a broader claimed range can, in certain instances, be proven by a narrower range of data. Often, one having ordinary skill in the art may be able to ascertain a trend in the exemplified data which would allow him to reasonably extend the probative value thereof. The proof, thus considered, might then be sufficient to rebut a PTO holding of *prima facie* obviousness. 595 F.2d at 56, 201 USPQ at 199.

See also *Ex parte Winters*, 11 USPQ2d 1387, 1388 (Bd. App. & Inter. 1989) (In order to prove non-obviousness for a genus of compounds, only *representative* species need be shown.).

In consideration of the above-discussion in connection with the amended claims submitted in this paper, withdrawal of the rejections is requested.

¹ 595 F.2d 48, 201 USPQ 193 (Fed. Cir. 1979).

A Notice of Allowance is also requested.

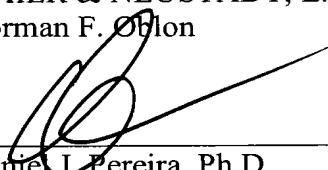
Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
Norman F. Oblon

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OSMMN 08/09)



Daniel J. Pereira, Ph.D.
Attorney of Record
Registration No. 45,518